

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date  
9 June 2005 (09.06.2005)

PCT

(10) International Publication Number  
**WO 2005/051595 A1**

(51) International Patent Classification<sup>7</sup>: **B23Q 1/00**

(21) International Application Number:  
**PCT/GB2004/004558**

(22) International Filing Date: 28 October 2004 (28.10.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
0325353.1 30 October 2003 (30.10.2003) GB

(71) Applicant (for all designated States except US): RENISHAW PLC [GB/GB]; New Mills, Wotton-under-Edge, Gloucestershire GL12 8JR (GB).

(72) Inventors; and

(75) Inventors/Applicants (for US only): HARDING, Andrew, James [GB/GB]; 24 Over Lane, Almondsbury, Bristol, South Gloucestershire BS32 4BP (GB). THOMAS, David, Kenneth [GB/GB]; 1 Clare Walk,

Thornbury, South Gloucestershire BS35 1EN (GB). HAYTER, Timothy, Donald [GB/GB]; 88 Parklands, Wotton-under-Edge, Gloucestershire GL12 7NR (GB).

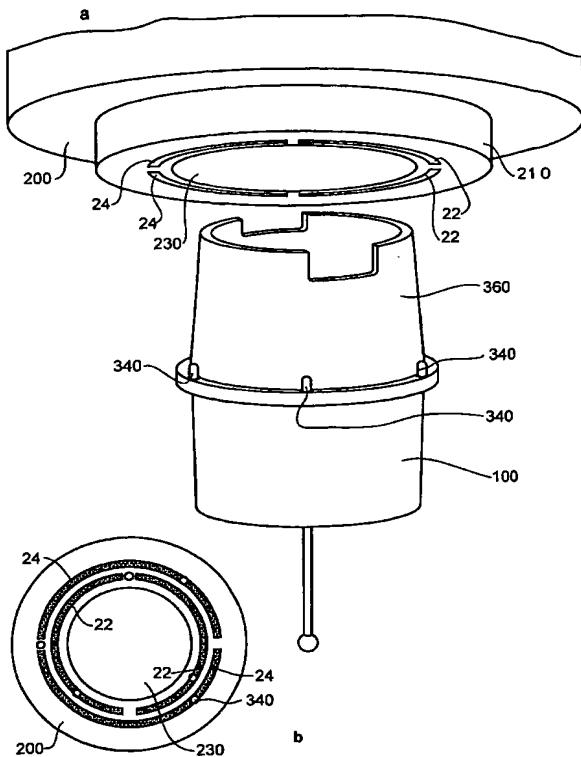
(74) Agents: LELAND, Emma, Clare et al.; Renishaw plc, Patent Department, New Mills, Wotton-under-Edge, Gloucestershire GL12 8JR (GB).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH,

[Continued on next page]

(54) Title: MACHINE ADAPTATION



(57) Abstract: Transmission of power and/or signal across a machine tool spindle shank is disclosed. Contacts (340) on the shank are connectable to tracks (24/22) on the spindle (210). A circuit (e.g. Fig 15) is used to determine the orientation of the contacts relative to the tracks when the shank is inserted in an unknown orientation into the spindle.

WO 2005/051595 A1



GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

**Published:**

— *with international search report*

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

**Declaration under Rule 4.17:**

— *of inventorship (Rule 4.17(iv)) for US only*